

ABSTRACT

Compositions and methods of metal-containing materials of metal-containing materials are disclosed. The metal-containing material can be, for example, an antimicrobial material, an anti-biofilm material, an antibacterial material, an anti-inflammatory material, an anti-fungal material, an anti-viral material, an anti-cancer
5 material, a pro-apoptosis material, anti-proliferative, MMP modulating material, an atomically disordered, crystalline material, and/or a nanocrystalline material. In certain embodiments, the metal-containing material is an atomically disordered, nanocrystalline silver-containing material.